

that emits illuminating light to the micro-mirror devices 1. Specifically, FIG. 3 illustrates the shapes of the micro-mirror devices that are projected when light from the light source is converged at  $10^\circ$  angles and illuminated to the diagonally-driven micro-mirror devices 1 for an image display apparatus which pivots at  $\pm 10^\circ$  angles, that is, which has a tilt angle of  $20^\circ$ . Compared to a tilt angle of  $0^\circ$  when parallel light beams are incident, the diagonally-driven micro-mirror device 1 has an optical efficiency of about 91%, which is obtained by taking the product of the cosine of the tilt angle and the square of the cosine of the convergence angle, i.e.,  $\cos(\text{tilt angle}) \times \cos^2(\text{convergence angle}) = \cos 20^\circ \times \cos^2(20^\circ)$ . Thus, an optical loss of about 9% is generated.

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